

HAYNES et al  
Appl. No. 09/960,717  
August 21, 2003

**AMENDMENTS TO THE CLAIMS:**

This listing of claims will replace all prior versions, and listings, of claims in the application:

1. (Cancelled).
2. (Cancelled).
3. (Previously Presented) The immunogen according to claim 16 wherein said ligand is an antibody, or Fab<sub>2</sub> or Fab fragment thereof.
4. (Previously Presented) The immunogen according to claim 16 wherein said ligand binds to a CCR5 binding site on gp120 and upregulates a CD4 binding site on gp120.
5. (Original) The immunogen according to claim 4 wherein said ligand is an antibody, or Fab<sub>2</sub> or Fab fragment thereof.
6. (Original) The immunogen according to claim 4 wherein said ligand is monoclonal antibody (mab) 17b, or Fab<sub>2</sub> or Fab fragment thereof, or mimic thereof.
7. (Previously Presented) The immunogen according to claim 16 wherein said ligand upregulates a CCR5 and a CD4 binding site on gp120.

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8. (Original) The immunogen according to claim 7 wherein said ligand is an antibody, or Fab<sub>2</sub> or Fab fragment thereof.
9. (Original) The immunogen according to claim 7 wherein said ligand binds to a site on gp120 to which mab A32 binds.
10. (Original) The immunogen according to claim 9 wherein said ligand is mab A32, or Fab<sub>2</sub> or Fab fragment thereof, or mimic thereof.
11. (Cancelled).
12. (Previously Presented) The immunogen according to claim 16 wherein said protein is in soluble form.
13. (Previously Presented) The immunogen according to claim 16 wherein said protein is associated with a cell vesicle or liposome.
14. (Cancelled).
15. (Previously Presented) The immunogen according to claim 16 wherein gp120, gp41 and said ligand are crosslinked.
16. (Currently Amended) An isolated immunogen comprising an HIV envelope protein bound to a ligand, which ligand upregulates at least one of the CD4

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binding site and the CCR5 binding site on said protein,

wherein said protein is gp120 noncovalently bound to gp41, and

wherein said immunogen further comprises an HR-2 peptide bound to said protein.

17. (Original) The immunogen according to claim 16 wherein gp120, gp41, said ligand and said HR-2 peptide are crosslinked.

18-27. (Cancelled).

28. (New) The immunogen according to claim 16 wherein gp120 is noncovalently bound to gp41.

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**REMARKS/ARGUMENTS**

Favorable consideration of this application and entry of the foregoing amendments are respectfully requested.

Claim 16 has been amended to additionally define the invention (attention is directed to the fact that claims 15 and 17, which depend from claim 16, make reference to crosslinking). New claim 28, which also depends from claim 16, specifies that gp120 is noncovalently bound to gp41, as specified in claim 16 prior to amendment.

An early and favorable Action on the merits is requested.

Respectfully submitted,

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